epitaxial growth layer grown on said semiconductor substrate, performing gas etching on said semiconductor substrate or on said epitaxial growth layer grown on said semiconductor substrate to form a V-groove with a side surface being a {111} B face, and forming an active layer only at the bottom of said V-groove.

23. A method according to Claim 22, wherein a gas having at least one type of halogen element is used as the etching gas for gas etching.

24. A method according to Claim 23, wherein said etching gas is hydrogen chloride, hydrogen bromide, arsenic trichloride, phosphorus trichloride or chlorine.

25. A method according to Claim 24, wherein said etching gas is hydrogen chloride.

26. A method according to one of Claims 22 to 25, wherein said substrate is a (100) substrate, and the stripe-like etching gas protective film is formed in <011> direction of said semiconductor substrate.

27. A method according to Claim 22, wherein said active layer is formed by organic metal vapor phase growth method.